

I Claim:

- 1.) A track system attached to a body connecting vest, the system for use with a weight support apparatus adapted to support a piece of equipment to give it improved stability against undesirable motion of the body to which the weight support apparatus is connected, the weight support apparatus having a support arm with a first and second ends, the first end adapted to connect to the piece of equipment, the second end including a mounting end for engaging the track system, the track system comprising:

track means extending outward from said vest and around the operator, said track means engaging said mounting end of said support arm of said weight support apparatus, said track means allowing for said mounting end of said support arm to slideably rotate along said track means in moving relation to said operator.

2.) The track system of claim 1, wherein said track means comprises:

parallel rigid extensions; and  
a rectangular plate, said rigid extensions affixed to the ends of said plate, said plate securing said rigid extensions in a fixed position.

3.) The track system of claim 2 wherein said parallel rigid extensions are selected from the group consisting of tubular, rectangular and square.

4.) The track system of claim 2 wherein said rectangular plate comprises mounting means, said mounting means for attachment of said track means to said body connecting vest.

5.) The track system of claim 1, wherein said outward extending track means are semi-circular.

6.) The track system of claim 2, wherein said track means further comprises a sliding channel member adapted to engage and move relative to said parallel rigid extensions, along the entire length of said extensions, said sliding channel member further including support arm locking means adapted to engage said

mounting end of said support arm, said sliding channel member supporting the weight of said support arm while allowing said support arm to slideably rotate along said parallel rigid extensions in moving relation to said operator.

- 7.) The track system of claim 6, wherein said sliding channel member further includes shaped receiving ends, said shaped receiving ends encasing said parallel rigid extensions, said shaped receiving ends in sliding engagement along the length of said parallel rigid extensions.
- 8.) The track system of claim 7 wherein said parallel rigid extensions further include grooves thereon.
- 9.) The track system of claim 8, wherein said shaped receiving ends further include locking means, said locking means engaging said grooves of said parallel rigid extensions, to lock said sliding channel member in place.
- 10.) The track system of claim 7, wherein said shaped receiving ends are arc shaped.
- 11.) The track system of claim 7, wherein said sliding channel member further includes a guiding member, said guiding member

formed between said shaped receiving ends, said guiding member in contact with and in sliding engagement along the surface of said rectangular plate.

12.) The track system of claim 11 wherein said guiding member is recessed.

13.) A weight support apparatus system especially adapted for operation as a portable device on a moving operator, and capable of being guided by the arm of the operator, comprising:

weight support means comprising first and second ends, said weight support means further including a vest worn by the operator, the first end being connected to and adapted to support at least part of the weight,

said vest including track means extending outward from said vest and around said operator, said track means engaging said second end of said support arm of said weight support apparatus, said track means allowing for said second end of said support arm to slideably rotate along said track means in moving relation to said operator,

said weight support means comprising at least a pair of first and second interconnected support arms, said support arms

being adapted to damp out vibrations due to movement of the operator.

14.) The weight support apparatus of claim 13, wherein said track means comprises:

parallel rigid extensions; and  
a rectangular plate, said rigid extensions affixed to the ends of said plate, said plate securing said rigid extensions in a fixed position.

15.) The weight support apparatus of claim 14 wherein said parallel rigid extensions are selected from the group consisting of tubular, rectangular and square.

16.) The weight support apparatus of claim 14 wherein said rectangular plate comprises mounting means, said mounting means for attachment of said track means to said body connecting vest.

17.) The weight support apparatus of claim 13, wherein said outward extending track means are semi-circular.

- 18.) The weight support apparatus of claim 14, wherein said track means further comprises a sliding channel member adapted to engage and move relative to said parallel rigid extensions, along the entire length of said extensions, said sliding channel member further including support arm locking means adapted to engage said mounting end of said support arm, said sliding channel member supporting the weight of said support arm while allowing said support arm to slideably rotate along said parallel rigid extensions in moving relation to said operator.
- 19.) The weight support apparatus of claim 18, wherein said sliding channel member further includes shaped receiving ends, said shaped receiving ends encasing said parallel rigid extensions, said shaped receiving ends in sliding engagement along the length of said parallel rigid extensions.
- 20.) The track system of claim 19, wherein said sliding channel member further includes a guiding member, said guiding member formed between said shaped receiving ends, said guiding member in contact with and in sliding engagement along the surface of said rectangular plate.